



When the rubber hits the road!

A qualitative analysis of Road Safety Policies of select Indian States.

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About CAG

CAG is a 37-year-old non-profit and non-political organisation that works towards protecting citizens' rights in consumer, civic and environmental issues and promoting good governance processes including transparency, accountability and participatory decision-making.

CAG has been working on road safety issues since 2015. We have conducted several training and awareness programmes for the general public in collaboration with various stakeholders including the relevant government agencies. CAG has created various IEC materials for building awareness among the public on road safety rules. Policy advocacy through research on Road Safety Policy and Road Safety Action Plans are also carried out to urge governments to build a holistic road safety management framework at the State and District levels. CAG also regularly carries out research on road safety such as helmet and seatbelt compliance studies, the results of which are shared with enforcement agencies for their consideration.

Executive Summary

Road safety is an important public health concern that incurs significant human, social, and economic costs. Road safety as a subject gained acknowledgement in the United Nations' Sustainable Development Goals, under the 'Good Health' and 'Sustainable Cities and Communities' goals in 2016. (United Nations, 2016).¹ For a long time now, Road Traffic Crashes (RTCs) have remained one of the top ten leading causes of death in low, middle income and upper middle income countries.² This underscores the need to understand the serious ramifications of road crashes, their liabilities; to promote awareness about road safety issues among various stakeholders; to consistently engage with them to implement road safety measures at different levels; and above all to secure political willingness to improve the road safety Policy is the first step towards initiating a proactive response to the existing road safety scenario. An official government policy will serve as a guide, steering road safety management and action at the state level.

This study examines the existing Road Safety Policies of 10 selected states in India showcasing a considerable change in their crash scenario post their policies. The study aims to assess the effectiveness of the policies in terms of their structure, language, quality of interventions corresponding to existing road safety scenarios and their proposed methods of implementation. Based on the set of focus areas considered in the National Road Safety Policy³ framework, the state policies were reviewed and compared. A set of indicators were then devised to evaluate each focus area in a qualitative manner, ultimately leading to scoring and ranking of each policy document.

The study demonstrated a high level of similarity in the lack of a clear and practical implementation strategy across the policies compared. It also showcased a need for setting quantitative targets and data-driven decision making contextual to each state's road safety scenario. The focus then narrows down to the state of Tamil Nadu, the trailblazer in formulating a Road Safety Policy. The study discusses the strengths and areas of improvement in the state's policy and also proposes a set of recommendations to refine the various aspects of the policy that will help steer practical, efficient action on ground.

¹ Transforming our world: the 2030 Agenda for Sustainable Development; Resolution adopted by the General Assembly on 25 September 2015, Seventieth session, UN. Retrieved from [<u>UN General Assembly</u>] ² World Health Statistics, 2020. Road traffic injuries fact sheet. WHO. Retrieved from [<u>https://www.who.int/data/gho/data/themes/topics/sdg-target-3_6-road-traffic-injuries</u>]; [<u>https://www.who.int/news-room/fact-sheets/detail/the-top-10-causes-of-death</u>]

³ National Road Safety Policy, 2010. Ministry of Road Transport and Highways. Retrieved from [https://morth.nic.in/national-road-safety-policy-1]

1 Background

India accounts for over 10 per cent of road crash fatalities globally, with over 150,000 citizens being killed annually on Indian roads. Over the years there has been a growing recognition of the complexity of the problem and the need to tackle it on various fronts. Countries have been implementing several measures to curb road crashes and their consequences for a number of years now. The global community has been prioritising road safety policy measures. In 2010, the United Nations General Assembly adopted the resolution 64/255⁴, establishing the Global Road Safety Decade of Action (2011- 2020) which aimed to reduce road crash fatalities around the world.

Road safety is also connected to transport and urban planning. It is now well-recognised that transport is a major contributor to greenhouse gas emissions. Globally, urban planning frameworks are focussed on ensuring access, equity, safety for all, as well as environmental concerns in transport planning. Therefore, there is a growing push for sustainable mobility i.e use of walking, cycling, and public transport as primary modes of transport. The link to road safety is that with a reduction in private vehicles and increased measures for safety, road crashes will decrease. Hence, road safety legislations/policies/plans need to be intertwined with those on mobility and transport planning.

1.1. Legislative frameworks

Road safety as a subject falls within the Concurrent List of the 7th Schedule of the Constitution of India. This gives both, the union and the state government, law making powers. However, the state's legislation cannot run afoul of union legislation. In terms of legislative frameworks, India has no dedicated legislation on road safety; instead aspects of road safety are included in the legislation governing motorised transport - the Motor Vehicles Act, 1988. However, the primary purpose of the Act is to regulate motor vehicles i.e the granting of permits, licences, etc. The Act was amended in 2019 (the Motor Vehicles Amendment Act, 2019 or MVAA). The MVAA brings a more holistic approach to transport, strengthening road safety by incorporating elements of the Safe Systems approach. For example, the MVAA brought in provisions to hold contractors/agencies, tasked with infrastructure development, accountable. The MVAA also calls for the creation of an advisory body, the National Road Safety Board (NRSB), to advise the government on road safety approaches and provide technical guidance.

In addition to the MVAA, there is the National Urban Transport Policy (NUTP) (of 2006⁵ and then 2014⁶) that sets the strategy/framework approach on transportation. The NUTP has as its

⁴ Resolution A/RES/64/255. Improving Global Road Safety. Sixty-fourth session of the United Nations General Assembly, New York, 10 May 2010. Retrieved from,

[[]Link]

⁵ National Urban Transport Policy, 2006. Ministry of Housing and Urban Affairs, India. Retrieved from [<u>https://mohua.gov.in/upload/uploadfiles/files/TransportPolicy.pdf</u>]

⁶ National Urban Transport Policy, 2006. Ministry of Housing and Urban Affairs, India. Retrieved from [Link]

underlying theme, sustainable mobility. It calls for cities to be planned for people, vehicles; to incorporate traffic planning from the start of any city planning process and not as an afterthought. The goal, it says, is livable cities which then require accessible, safe, comfortable, convenient public transportation for all. The NUTP states that a national policy, that provides a guiding framework to aid states in planning their regional transportation, is crucial given the multiplicity of organisations/systems connected to transport and the lack of coordination between them. Interestingly, the NUTP comes under the Ministry of Home and Urban Affairs (MoHUA) and not the Ministry of Road Transport and Highways (MoRTH) - an indication of the focus and strategic approach of the ministries.

At the state level, states have the freedom to frame certain rules (as defined in the MVAA) such as speed limits, penalties. States also can frame their own mobility and/or road safety policies. While comprehensive mobility and non motorised transport policies are relatively new concepts, road safety policies have been in existence for nearly two decades. A draft National Road Safety Policy was first formulated by the Sunder Committee in 2007 along with its report on road safety and traffic management in the country.⁷ The policy was subsequently approved in 2010. The National Road Safety Policy recognises that poor people and vulnerable road users are the most impacted by road crashes and calls upon the union government and state governments to work on greater public awareness; improved data collection and management; safer infrastructure; safer drivers through licensing reforms; safer vehicles; better enforcement; and improved emergency response services.

1.2. Institutional frameworks

The institutional framework of road safety management and transport at the national level is clearly defined. At the Centre is the Ministry of Road Transport & Highways (MoRTH) - the nodal agency. MoRTH is aided by the National Road Safety Council (NRSC)⁸ - constituted under Sec 215(1) of the Motor Vehicles Act 1988. The Council is chaired by the Hon'ble Cabinet Minister of the Ministry of Road Transport and Highways (MORTH) and the official members of NRSC include the Ministers of State for MORTH, Minister-in-charge of Road Transport in States/UTs, representatives from central ministries and departments such as Ministry of Home Affairs, Human Resource Development, Railways, Ministry of Petroleum and Natural Gas, Department of heavy Industry, Ministry of Environment and Forests, Ministry of MORTH, Chairman of National Highways Authority of India (NHAI), Director General (Road Development), Special Secretary, MoRTH and Joint Secretary (Transport), MoRTH.⁹ The non-official members include Road Safety Award winners, individuals nominated by the Hon'ble Minister of MoRTH, representatives from government institutions related to road construction, road safety and insurance and other associations related with road safety. Though information on

⁷ National Road Safety Policy, 2010. Ministry of Road Transport and Highways. Retrieved from [https://morth.nic.in/national-road-safety-policy-1]

⁸ Motor Vehicles Act, 1988., 1st July, 1989, vide notification No. S.O. 368(E), dated 22nd May, 1989, see Gazette of India. Retrieved from [https://legislative.gov.in/sites/default/files/A1988-59.pdf]

⁹Ministry of Road Transport and Highways, 2015. Resolution, Gazette of India. [Link]

frequency of meetings of the council and its contribution to road safety management is not readily available on MoRTH's portal, views by members of the council on topical road safety concerns are registered in various news articles regularly. There is also the Supreme Court Committee on Road Safety - a body appointed by the Supreme Court of India - which arose out of a public interest litigation on road safety filed in 2004. The Supreme Court has a history of taking *suo moto* notice of issues and giving periodic injunctions/directives to the executive branch of the government.

At the state level, there are transport or motor vehicles departments (the name varies from state to state) which are responsible for implementing a large part of the legislation. As per the 1988 Act, states were to form a State Road Safety Council and District Road Safety Committees (DRSCs). The formation and functioning of the Council and the Committees is erratic and varied from state to state. In Tamil Nadu, a review of the DRSCs functioning by CAG in 2020 found that the focus is on public awareness. The DRSCs have a lack of capacity; knowledge and understanding of road safety science and mobility issues. Road safety issues that come up for discussion are not investigated and simplistic solutions such as setting up barricades and erecting signages are resorted to. Equitable access and safety of road users is not prioritised as this is not seen as a concept while easing traffic congestion is the main preoccupation. The DRSCs are supposed to develop annual road safety action plans. At least in Tamil Nadu, hardly 1-2 districts seem to be attempting to develop a plan.

1.3. Rationale

India continues to account for the most road crashes at the global level with data suggesting 53 crashes every hour.¹⁰ The state of Tamil Nadu has ranked the highest in terms of the number of annual road crashes for six consecutive years (2015-2020) contributing to more than 10,000 road fatalities in 2019.¹¹

While legislative and institutional mechanisms are in place, the poor planning and implementation have been major hurdles in reducing crashes and fatalities. Policy documents play a crucial role in bridging the gap between legislation and implementation. A policy sets out the purpose/goals, approaches, and underlying principles of the government towards a given subject. With road safety clearly linked to urban planning, traffic management, and sustainable mobility, road safety agencies must frame their road safety efforts in a broader setting that goes beyond reducing fatalities. Road safety policies need to be kept in mind while developing road safety action plans.

¹⁰ Ministry of Road Transport and Highways (MoRTH), 2020. Road Accidents in India 2019. Transport Research Wing, Government of India, New Delhi. Retrieved from [MoRTH Accident Data 2018]

¹¹Ministry of Road Transport and Highways (MoRTH), 2020. Road Accidents in India 2019. Transport Research Wing, Government of India, New Delhi. Retrieved from [<u>MoRTH Accident data_2019</u>] Ministry of Road Transport and Highways (MoRTH), 2022. Road Accidents in India 2020. Transport Research Wing, Government of India, New Delhi. Retrieved from [<u>MoRTH Accident data_2020</u>]

This calls for an immediate review of the existing Road Safety Policy regime to propose recommendations that will reap realistic, effective responses.

2. Methodology

To better understand the framework of the State Level Road Safety Policies, 10 states were selected to be reviewed in detail. The states were selected based on the following considerations:

- Similar population growth rates as Tamil Nadu
- Evidence of best practices in terms of improvements in the road safety system
- Significant change in the number of annual road crashes in the last five years

States	2015	2016	2017	2018	2019	Change - 2019 over 2018
Tamil Nadu	69,059	71,431	65,562	63,920	57,228	-6,692
Madhya Pradesh	54,947	53,972	53,399	51,397	50,669	-728
Kerala	39,014	39,420	38,470	40,181	41,111	930
Karnataka	44,011	44,403	42,542	41,707	40,658	-1049
Maharashtra	63,805	39,878	35,853	35,717	32,925	-2792
Gujarat	23,183	21,859	19,081	18,769	17,046	-1723
Haryana	11,174	11,234	11258	11,238	10,944	-294
Punjab	6,702	6,952	6,,273	6,428	6,348	-80
West Bengal	13,208	13,580	11,631	12,705	10,158	-2547
Delhi	8,085	7,375	6,673	6,515	5,610	-905

Table 1: State wise annual road crash statistics ¹²

¹² Ministry of Road Transport and Highways (MoRTH), 2020. Road Accidents in India 2019. Transport Research Wing, Government of India, New Delhi. Retrieved from [MoRTH Accident Data 2018]

Ministry of Road Transport and Highways (MoRTH), 2020. Road Accidents in India 2019. Transport Research Wing, Government of India, New Delhi. Retrieved from [MoRTH Accident data 2019]

Ministry of Road Transport and Highways (MoRTH), 2022. Road Accidents in India 2020. Transport Research Wing, Government of India, New Delhi. Retrieved from [MoRTH Accident data_2020]

States	2011 (Census)	2021 (UIDAI estimates) In crores
Tamil Nadu	7,21,47,030	7.65
Kerala	3,34,06,061	3.55
Karnataka	6,10,95,297	6.70
Maharashtra	11,23,74,333	12.44
Madhya Pradesh	7,26,26,809	8.45
Gujarat	6,04,39,692	7.00
Haryana	2,53,51,462	2.95
Punjab	2,77,43,338	3.00
West Bengal	9,12,76,115	9.80
Delhi	1,67,87,941	2.00

Table 2: State wise popula	ation statistics - 2011 vs 2021^{13}
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A comparative review of policies of the selected states was then performed based on the common focus areas as per the framework laid out by the National Road Safety Policy.¹⁴ These are:

- 1) Awareness on road safety issues
- 2) Road safety information database
- 3) Road safety infrastructure rural and urban road facilities
- 4) Safe speed
- 5) Safer vehicles
- 6) Safer drivers
- 7) Safety of Vulnerable Road Users (VRUs)
- 8) Road safety education and training
- 9) Enforcement of safety laws

¹³ Census 2011, Ministry of Home Affairs, Government of India.

Unique Identification Authority of India, 2021. State/UT wise population projection and Aadhaar saturation, Government of India, New Delhi. Retrieved from [UIDAI]

¹⁴ National Road Safety Policy, 2010. Ministry of Road Transport and Highways. Retrieved from [https://morth.nic.in/national-road-safety-policy-1]

- 10) Emergency Medical Services (EMS)
- 11) Human Resources Development (HRD) and research road safety
- 12) Legislation (i.e setting up of state-level institutional frameworks)
- 13) Institutional roles and responsibilities
- 14) Funding
- 15) Implementation strategy

3 Review and discussion

All the states that have been considered have adopted the framework laid out by the National Road Safety Policy document, and have rephrased the focus areas to suit the state's existing road safety scenario, constraints, and priorities. The pros and cons of each state's policy structure, their focus areas and the details presented have been reviewed and summarised below.

3.1 Kerala

The state's Road Safety Policy¹⁵ notified in 2016, identifies a clear cut vision of "Zero tolerance" with three focus areas which are as follows:

i) Prioritising human health and life

ii) Pardoning human errors - Facilitating improved transportation systems to minimise scope of human error on roads

iii) Public concern - Safety of all segments of road users by ensuring best safety standards for all user groups through providers and public health authorities.

The policy also attempts to fix quantified targets for reducing the annual number of road crashes to 50% by 2025 (the base year for all the state targets is the year the state policy was adopted) and to zero by 2030 with the base year being the year in which the policy was adopted. This is not backed by any transparent information about either the state's existing road safety data, or the analysis of arriving at the quantitative time-based targets. By doing so, it underplays the importance of the existing road safety scenario and data-driven decision making. The state's policy tries to address all the focus areas as laid out by the National Road Safety Policy but misses out on prioritising "safe speed" as one of its goals. Although each focus area and its statement of action does cover the identification of enforcement measures, implementation strategies and departments of the state government and other urban local bodies responsible for specific actions, details of institutional roles and responsibilities, capacity building and legislation have been scantily addressed. The positives of the legislative scenario is that the state has an established Road Safety Authority in place to action the Road Safety Policy; it also leaves room for continuous refinement of the policy and action plans.

¹⁵ Road Safety Policy, 2016, National Transportation Planning and Research Centre, Thiruvananthapuram. Retrieved from [Road Safety Policy, Kerala]

3.2 Karnataka

The state of Karnataka notified its Road Safety Policy¹⁶ in 2015 with a vision of facilitating a safe road network for all road users, prioritising pedestrians and cyclists. The policy also incorporated a time based target to reduce road accidents by 20% and fatalities by 30% by 2020 from the time the policy has been adopted. The document excels in showcasing a crisp structure with short term goals for various focus areas such as enforcement of safety laws, Emergency Medical Services (EMS) and an increased focus on inter-departmental coordination. It takes cues from various international best practices to enhance rural and urban road infrastructure. The policy also identifies alternate sources of funding to support road safety action, which most of the states fail to do.

However, the policy document fails to comprehensively address the safety of Vulnerable Road Users (VRUs) through key actions, as it does not elaborate on focus areas such as safe drivers, safe vehicles, road safety education and training; all of which contribute to safety of VRUs. One cannot view any problem statement in isolation; rather these should be addressed as potential interdependencies. The policy fails to do this. The policy is also amiss in referencing existing statutory laws and clear identification of departments, roles and responsibilities to implement action on ground.

3.3 Maharashtra

Maharashtra adopted its Road Safety Policy¹⁷ relatively late, nearly five years after the national policy, in 2017. The document starts by identifying specific focus areas to work with which include:

- Unskilled drivers
- Unfit vehicles
- Lack of effective enforcement
- Improper road design
- Pedestrian behaviour

The major highlight of the policy is an exclusive policy statement that recognizes the need for different agencies such as Public Works Department, Local Self Government, Highway Authorities, Police, Health department, Education department, NGOs etc) to work together by taking up road safety activities throughout the year. However, the policy is neither anchored by a vision nor quantitative time-bound targets that guides and streamlines its road safety action.

¹⁶ Road Safety Policy, 2015, Notification dated 21-09-2015, Government of Karnataka. Retrieved from [<u>Road Safety</u> <u>Policy, Karnataka</u>]

¹⁷ Road Safety Policy, 2018, Notification dated 20-05-2017, Government of Maharashtra. Retrieved from [<u>Road</u> <u>Safety Policy, Maharashtra</u>]

The policy identifies a definite structure in terms of its implementation strategy. It identifies the transport department of the government of Maharashtra as the apex nodal agency for implementation of the policy and the State Road Safety Council under the chairmanship of the Transport Minister to guide action on ground. The policy also mentions a separate legislation titled "Maharashtra Transport Act" to enable legally backed road safety action that is in resonance with the state's needs and targets. The state is one of the very first ones to recognize the importance of effective enforcement of MVA provisions in its Road Safety Policy citing clear references to the existing legislation framework wherever necessary.

The policy, however, misses a few significant details. Human Resources Development and Research; and Road Safety Information Database are two major focus areas that the state's policy does not discuss. Time period for achievement of short term goals and annual routine targets are not mentioned clearly under each policy statement. This leads to ambiguity in the implementation strategies and does not serve the purpose of a policy document in its entirety to reinforce action on ground.

3.4 Madhya Pradesh

The state of Madhya Pradesh adopted its Road Safety Policy¹⁸ in 2015 with a vision of achieving 'road safety for no accidents'. Its quantitative targets include reduction of road crashes by 50% and road fatalities by 50% according to the state's "Proclamations 2011-2020" - Decade of Action for Road Safety. The state's alignment with the global goal is reflected in its Road Safety Policy which is a hit.

The structure of the document is definite and the language is easy to understand. For every pillar/focus area, the structure is the same, creating familiarity for any common person reading it. Each focus area has a defined policy statement and a policy implementation strategy outlined with reference to enforcements as per MVA 1988 and other central legislation. A detailed strategy is discussed with reference to different stakeholders and agencies identified. Government departments are also identified and targets are set for each with detailed responsibilities. This is one of the most comprehensive Road Safety Policy documents that collectively addresses road safety and provides a guideline for interdepartmental, multi-stakeholder approach to road safety. Interdependencies across various sectors are duly addressed and the document covers all 15 focus areas laid out by the National Road Safety Policy.

3.5 Gujarat

The Road Safety Policy of Gujarat¹⁹ took shape in 2016 with a subsequent institutional framework and legislation backing the policy in the form of the Gujarat Road Safety Authority

¹⁸ Road Safety Policy, 2015, Notification dated 31-03-2015, Government of Madhya Pradesh. Retrieved from [<u>Road</u> <u>Safety Policy. Madhya Pradesh</u>]

¹⁹ Road Safety Policy, 2016, Government of Gujarat. Retrieved from [Road Safety Policy, Gujarat]

Act 2018 and the Gujarat Road Safety Authority Rules, 2020 respectively. It sets an ambitious quantitative target to reduce road crashes as well as fatalities by 50% by 2020 from the year of the policy adoption i.e. 2016. The policy views road safety as a major public health issue with a special emphasis on Vulnerable Road Users. It highlights the importance of a multi-stakeholder approach wherein the government, CSOs, private sector and the people are equally involved in bringing a positive change. The difference the policy brings in regards to designing of roads is that it identifies strategies for capacity building that include regular training and dissemination of best practices to highway engineers, town planners, architects and traffic engineers at different levels of the hierarchy to ensure quality infrastructure. Though the policy identifies implementation and enforcement strategies under each focus area, it does not furnish proper information on the lead agency's roles and responsibilities for implementation of the policy. It also joins the pool of a majority of the policies in terms of lack of clarity in resource, budget allocation and building on existing central legislation.

3.6 Haryana

The state of Haryana notified its Road Safety Policy²⁰ in the year 2016 with a vision of strengthening the four Es with respect to road safety namely:

- Engineering
- Enforcement
- Education
- Emergency Care

A 50% reduction in road fatalities and injuries by 2025 considering the base year as 2015 is the quantitative target that has been set by the state. The state's vision is supported by its strategies under each focus area abiding by the "Safe Systems Approach", an international best practice that comprehensively addresses the multitude of road safety aspects.

The state capitalises on the existing institutional framework, the Road Safety Council already established by the state government under Section 215 of the MVA, 1988 which functions under the chairmanship of the Transport Minister. The District Road Safety Committees (DRSCs) have also been notified (vide notification dated 12.03.1998) under the chairmanship of the respective Deputy Commissioners. It proposes an additional dedicated Steering Committee on Road Safety headed by the Chief Secretary of the government of Haryana to help evolve effective road safety strategies and monitor effective implementation of the Road Safety Policy.

The policy proposes to create a State Road Safety Fund under the purview of the Transport Department which is the nodal agency for implementing the road safety policy. However, the powers of the Steering Committee gets skewed here as it adds on to say that the policy shall be implemented as per the relevant rules mentioned in Haryana Road Safety Fund Rules, which in

²⁰ Road Safety Policy, 2016, Notification dated 30-03-2016, Government of Haryana. Retrieved from [Road Safety Policy, Haryana]

itself is a separate notification. Such references to various notifications can prove extensive to action road safety plans with regards to the vertical and horizontal coordination among a variety of institutions. It is also challenging for a common person to get an understanding of the institutional ecosystem and its functioning.

No institutional roles and responsibilities have been formulated with regards to specific policy statements and there is no mention of existing statutory laws in case of enforcement parameters and strategies. Another downside to the policy structure is that it does not furnish a glossary to explain the technical terms and concepts associated with the international best practices adopted which limits accessibility and awareness of such road safety innovations and policies. Conceptual policy statements without practical time-based short term/interim targets leaves us with a question of implementation and accountability by the state.

3.7 Punjab

Punjab notified its Road Safety Policy²¹ in 2014 listing 11 areas of focus with a primary attention to practical solutions for implementation and better enforcement. The areas of focus are as follows:

- Horizontal coordination with different ministries and agencies
- Vertical coordination with ministries at national and regional level
- Legislative framework
- Recognition of importance of Non-Motorised Transport
- Resource mobilisation and allocation
- Funding mechanisms
- Delivery of interventions
- Mechanisms for achieving results
- Systems for monitoring and evaluation
- Involvement of civil society and professionals
- Research and technical base Data base management

The pros of the policy document in facilitating a positive change lies in its vision to ensure political commitment, capacity strengthening and adopting a holistic 'Safe Systems Approach' to the road safety delivery mechanism. This policy is the first amongst the states reviewed in this study to recognise the need for a political commitment. This is a commendable consideration as coordinated efforts by the national and state governments to address road safety issues remain critical. It identifies the Punjab Road Safety Council as the lead agency to implement the policy through multi-sectoral coordination which has been emphasised under each focus area of the policy. The prelude to the policy is a comprehensive data analysis and number crunching on the existing scenario that helps identify gaps and existing systemic constraints. The policy then goes on to respond through appropriate interventions based on the issues prioritised. Each focus area

²¹ Road Safety Policy, 2014, Notification dated 20-11-2014, Government of Punjab.Retrieved from [Road Safety Policy, Punjab]

lists time based interventions to ensure achievable outcomes and references existing statutory provisions in detail, wherever necessary. It also suggests strategies to ensure quality at various stages of planning design, manufacture, usage, operation and maintenance of both motorised and non-motorised vehicles as per international standards and practises thereby minimising safety risks and environmental effects. It also recognises the power of the Centre in this aspect and suggests to leverage the functions to the state. In terms of funding, it identifies alternate sources in addition to the Centre's share by emphasising the involvement of corporate social responsibility, insurance companies guided by an insurance regulatory body, and development authorities.

The only con about this well-structured policy is that the document gets a bit extensive for a quick read. An executive summary of key points and an annexure showcasing the detailed data analysis would have created an easily readable policy.

3.8 West Bengal

The State of West Bengal notified its Road Safety Policy²² in 2016 with a target statement to reduce by 20%, the road accidents and fatalities by 2020. Its vision covers an approach to create a safe road network for all road users in the state with a view of achieving 'zero road accident figure' in the long run. The policy has well defined implementation strategies under the rural and urban road infrastructure and database management areas. However, the document does not fully address the concerns under each focus area. The document has adopted the skeleton of the National Road Safety Policy with no additions contingent to the road safety scenario of West Bengal. It has excluded two important focus areas namely safe speed and Vulnerable Road Users. No mention/reference to existing statutory laws is seen. Though the policy identifies the lead agency as the Road Safety Council which comprises of senior officials from Home, Transport, Health & Family Welfare, Urban Development, Public Works, Municipal Affairs, Law, Panchayat and Rural Development departments, encouraging multi-stakeholder coordination; and clearly defines the role of the Council, it fails to identify institutional roles and responsibilities with regards to specific policy statements.

3.9 Delhi

The Road Safety Policy of Delhi²³ was notified in 2018 with its vision aimed at ensuring road safety for all road users with a special focus on pedestrians and cyclists. The Policy document works on the premise of the four Es namely:

- Engineering
- Enforcement

²² Road Safety Policy, 2016, Government of West Bengal.Retrieved from [Road Safety Policy, West Bengal]

²³ Road Safety Policy, 2018, Notification dated 13-07-2018, Government of NCT of Delhi. Retrieved from [Road Safety Policy, Delhi]

- Education
- Emergency Care

With a quantitative target aimed at reducing road accidents and fatalities by 30% between 2018 and 2020; and by 80% between 2018 and 2025, with a minimum of 10% year on year reduction, Delhi's road safety policy firstly recognises the powers and functions of the existing institutional framework and builds upon it under specific policy statements to work out a fairly actionable plan. It references existing statutory provisions in detail, wherever necessary. It lists clearly defined strategies under each focus area with emphasis on road safety education, training, capacity building, resource allocation and effective monitoring. It also aims at creating a public interface showcasing the progress of the policy to ensure public and private sector involvement while enabling transparency and accountability. The policy presents a broad outline of the road safety initiatives to be taken and passes the responsibility of planning elaborate activities to the various departments and stakeholders. It suggests a periodic review of the policy to be undertaken by the lead agency which most of the other states have missed out on. The State Road Safety Council has been entailed with the responsibility of formulating better recommendations but a time period or frequency for such reports has not been mentioned.

The document is fairly well structured, uses simple language and furnishes all necessary details in terms of establishing a base idea of the existing scenario of Delhi's road safety issues, identifying areas for improvement, listing practical strategies to be adopted, strengthening of existing institutional arrangement, database management and details on planning and design-oriented solutions such as safety standards for roads etc. This makes the document easily understandable to anyone reading it.

3.10 Tamil Nadu's Road Safety Policy²⁴

3.10.1 Hits

Notified in the year 2007, Tamil Nadu is celebrated as the pioneer in formulating the Road Safety Policy. The skeleton of the policy document has been adopted from the draft of the National Road Safety Policy. It identifies a road safety vision backed by data facts, with Engineering, Enforcement, and Education as the major thrust areas. This is further supported by a quantitative target: a medium term objective to achieve a 20 percent reduction in fatalities and injuries by 2013, considering 2006 as the base year. Such identified time-targets help the government and the public enable quick action on ground and help in achieving measurable outcomes. The policy also recognises the need for an improved data collection process and reliable information database to record road crashes and the various causation factors. Safe road infrastructure, safe drivers, effective enforcement practices and Emergency Medical Response (EMR) with a focus on increasing hospital capacity, funding and strengthening the institutional framework are other striking considerations of the policy. Tamil Nadu being the trailblazer of the

²⁴ Road Safety Policy, 2007, Notification dated 13-04-2007, Home, Prohibition and Excise (Transport -V) Department, Government of Tamil Nadu. Retrieved from [Road Safety Policy, Tamil Nadu]

Road Safety Policy has included an exclusive focus area advocating for 'Safe Speed' to assist the promotion of safety for Vulnerable Road Users (VRUs) which most of the other states have missed out on. The structure of the document is easy to understand and unlike most of the other states, the policy language used is simple, assuring an easy read for a common man.

3.10.2 Misses

Although Tamil Nadu's Road Safety Policy identifies and prioritises the focus areas in a clear manner with action statements drafted under each, it falls into the common pattern of what a fair share of the other states have done in their Road Safety Policy documents viz. lack of clarity on an implementation strategy for each action statement devised. A practical, law-abiding institutional framework to support action on ground is a major miss. No exclusive policy statement reinforcing the need to view road safety as a multi-sectoral concern and focus on interdepartmental coordination has been considered. Application of road safety policy provisions with regards to urban and rural areas have not been clearly mentioned. Mandatory periodic policy review remains unaddressed in the document. The policy does not refer to or mention the provisions of the Motor Vehicles Act, its amendment and other existing central legislation since the policy stands unexamined since its formulation in 2007. With a constantly growing vehicular population and a worrying road safety scenario with the highest number of road crashes in the country, this policy being stagnant does not enable any change in the road safety ecosystem of Tamil Nadu. This indirectly paves the way for underestimating the weightage of the road safety concerns and the prevailing delinquent and dangerous road user behaviour. It also leads to ambiguity and shallow enforcement of existing statutory provisions.

Research and Development is one of the most important aspects that contributes to widening of knowledge and fine tuning of the policy. This has not been prioritised nor mentioned in Tamil Nadu's Road Safety Policy. Tamil Nadu lacks appropriate resource allocation – personnel; training and education; and use of equipment/technology in everyday enforcement routines owing to poor research and capacity building strategies. The policy fails to recognise the need for political commitment and emphasise the need for the state and the Central governments to work hand in hand. This has left the action on ground, at different levels of governance such as the State, District and Urban Local Bodies (ULBs), unanchored with work happening in silos. Hence, in spite of some significant progress in the road safety scenario in terms of post-crash care infrastructure and leveraging the use of technology, the state has not been able to capitalise on it.

In comparison with road safety policies of other states, Tamil Nadu is yet to explore and adopt best practices from international case studies. (E.g.: "Safe Systems Approach" that has been adopted by the State of Haryana and holds an inherent place in its Road Safety Policy vision). In terms of a financial framework, though the policy identifies the need for involvement of private participation, it does not clearly outline details of a dedicated budget and funding sources for each devised action, thereby not empowering the implementation and the immediacy with which the action needs to be taken.

4 Key findings

4.1 Strengths

Following the review and key highlights from each state is a summary of the common observations across them all,

- A road safety vision or a mission statement that is backed by data/facts about the existing road crash scenario.
- Quantitative targets that are time bound supporting the vision/ the mission statement. This helps to recognise the intensity of the concern at hand and work towards achieving measurable outcomes.
- Adoption of best practices from international case studies.
- Recognising the need for political commitment and emphasising the coordination of the State and the Central governments in the Road Safety policy.
- Identification of existing policy constraints and responding accordingly through data-driven decision making as seen in Punjab's Road Safety Policy.
- Exclusive policy statement reinforcing the need to view road safety as a multi-sectoral concern and focus on interdepartmental coordination.
- Application of road safety policy provisions in urban and rural areas.
- Defining short term goals and interim targets under each focus area or policy theme.
- Defining the legal and institutional framework that would support implementation of the proposed road safety measures clearly specifying the roles and responsibilities of agencies/stakeholders involved.
- Data driven decision making that helps the policy be built over existing road safety initiatives and institutional framework.
- Strategize the procurement of funds from various financial sources, required to act on the proposed road safety initiatives.
- A comprehensive understanding of the various end users and defining road safety measures that equally address all road user groups.

4.2 Weaknesses

- Most of the policy documents just furnish the list of actions/measures that are to be taken. Lack of an implementation strategy in terms of a practical, legal and institutional framework is a critical observation that needs to be addressed.
- Lack of appropriate distribution of power and responsibilities from the centre to the local level groups. This limits vertical coordination with local organisations, CSOs that are interested in supporting road safety activities.

- Lack of definitions for technical terms/global concepts adopted in the Road Safety Policy. (Eg: Forgiving roads and Self-Explaining roads; Road worthiness etc.)
- Lack of specification of time period for annual routines, short term inspections/audits under the specific focus areas translating to ineffective implementation on ground.
- Ambiguity and negligence of existing statutory provisions due to lack of reference or mention of the valid laws/rules. (Eg: Majority of the policies do not reference or mention the provisions of Motor Vehicles Amendment Act MVAA, 2019 and other central legislations that already exists)
- Lack of focus on varied user groups Vulnerable Road Users (VRUs) and vehicle categories two-wheelers, four-wheelers and commercial vehicles.
- Lack of appropriate resource allocation enforcement personnel; training and education; equipment/technology.
- Lack of a dedicated budget and defined funding components resulting in an unsustainable model of implementation.
- Care should also be taken to ensure that the document is not extensive for a common man's reading. Therefore, a comprehensive structure is to be followed with annexures to details wherever necessary.
- Lack of legislation or guidelines for mandatory policy reviews and no mention of the frequency for conducting such periodic reviews.

5 Qualitative Evaluation

5.1 Scoring

Based on the above observations and literature review of Road Safety Management in the international context, qualitative scoring of the policy document has been attempted. Depending on the organisation, structure and comprehensive detailing of the document, the below scoring guide was used for each of the focus areas laid out by the National Road Safety Policy framework.

5.2 Rationale

Each focus area considered in the State's Road Safety Policy gets a total score of 3 based on the following evaluation parameters,

- 1) Is the particular focus area included in the policy?
- 2) Are operational targets mentioned with a time frame (short term, interim and long term) under the considered focus area?
- 3) Does the policy outline strategies and actionable measures that build on the existing scenario under the considered focus area?
- 4) Does the policy mention enforcement targets to be achieved under the considered focus area?

- 5) Does the State define a regulatory framework or an institutional structure; designate a lead agency? Does it also clearly assign the roles and responsibilities for implementation, enforcement and monitoring to different departments?
- 6) Are the assessments and audits mentioned under the considered focus area mandated to be performed periodically?
- 7) Does the policy mention plausible resources (qualitative: education and training etc. quantitative: data collection and management, infrastructure facilities, capacity building etc.) for implementation of the strategies and measures mentioned under each focus area?
- 8) Does the policy identify stable sources of funding for efficient implementation under each focus area? (or) Does the policy collectively define a dedicated budget to support timely action on ground?
- 9) Does the policy have innovative and exclusive action statements that are not a part of the existing framework of the National Road Safety Policy?

Compliance to Evaluation Parameters	Performance Level
Nil / < 25%	0 - Not clear
25% - 50%	1 - Limited
50% - 75%	2 - Average
75% and above	3 - Good

All these questions are to be answered based on the following scale of performance.

The following table shows the scores of each State's Road Sa	fety Policy document,
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State	Total scores (x/45)
Tamil Nadu	18
Kerala	22
Karnataka	22
Maharashtra	20
Madhya Pradesh	33
Gujarat	26
Haryana	21
Punjab	37

West Bengal	26
Delhi	38

Table 3: Scores of the road safety policies of different states of India

Tamil Nadu's Road Safety Policy has landed the least score owing to the following reasons,

- The policy was drafted in the year 2007 and has not been reviewed or revised since that time.
- The policy has well drafted action statements including advocacy for safe speed and improved private participation in funding, but they are neither supported by a practical implementation framework (legal and institutional), nor backed by data points. This has left the action on ground disjointed from what the policy intends to do.
- The policy does not address the need for improved data competency under crash investigation with a practical proposition.
- The policy does not mention anything about the application of its provisions in terms of the geographical spread i.e. for urban and rural areas.
- The policy does not mention or refer to the provisions of existing central legislation including MVA 1988.

6 Recommendations

Being aware and mindful of the latest developments in the arena of road safety in Tamil Nadu, the following suggestions should be considered.

- A review of the existing Road Safety Policy Document by an Interdepartmental Steering Committee with a keen focus on the policy constraints, implementation challenges and fund allocation should be conducted.
- Mandate such annual periodic reviews through means of legislation.
- Improve data competency under crash investigation to support data-driven decision making in line with the recent MoU signed by the Special Task Force, Road Safety, Government of Tamil Nadu and the Centre of Excellence for Road Safety CoERS, IIT-Madras for conducting scientific investigation of crashes²⁵, the honourable Chief Minister's proactive approach towards road safety with the introduction of schemes for post-crash care (Innuyir Kaapom)²⁶, and his probe on exclusive databases for road crash and fatalities. The policy should therefore call for improved quality of crash data and adequate infrastructure to centralise its operation and further implementation.

²⁵ IIT-M signs MoU with state government on road safety, 2022. Times of India, Dated July 30, 2022. Retrieved from [<u>https://bit.ly/3QdcotS</u>]

²⁶ Tamil Nadu launches emergency care scheme, 2021. The Hindu, Dated December 18, 2021. Retrieved from [https://bit.ly/3zXRha0]

- Ensure quantitative targets are set on various categories such as road safety strategy/vision, action plans, and enforcement by defining short term goals and interim targets under each focus area backed by data driven decision making.
- Realistic time based targets to be set to measure actions and prioritise implementation.
- Define the legal and institutional framework with appropriate reference to existing central and local level laws to support implementation of the proposed road safety measures. This should also include clear specifications of the roles and responsibilities of the agencies/stakeholders involved.
- Appropriate distribution of power and responsibilities from the state to the local level groups, thereby empowering inter-departmental consultation and coordination with all stakeholders including Civil Society Organisations (CSOs) that are interested in supporting road safety activities.
- Specify a time period for annual routines, short term inspections/audits under the specific focus areas and mandate them through legislation to enable effective monitoring of progress.
- Focus on Research and Human Resource Development through the establishment of dedicated research institutes for road safety in collaboration with reputed academic institutes.
- Identify areas where research and data gaps are prevalent in the State, eg. road traffic injury data, non-wearing of helmets and seatbelts data etc, Mandate such data collection and audit routines by facilitating the process with the required capacity.
- Leverage the use of technology and equipment in monitoring and implementation by scaling the usage of facilities such as Automatic Number Plate Recognition (ANPR) cameras, Variable Message Sign (VMS) boards, ASES (Automatic Speed Enforcement System) poles including 4D radar, speed tracker and Automatic Video Incident Detection System (AVIDS) etc. that have been currently employed in selected stretches of the State's capital city, Chennai.
- Allocate a dedicated road safety budget with sub-allocations to road safety infrastructure, education and training, e-enforcement, etc. so that a majority of the budget is not spent solely over awareness building measures.
- It is important that the policy addresses that cars and two-wheelers are involved in the majority of the road crashes and mandates safety features such as speed control devices, seat belt warning systems, Anti-Lock Braking System (ALBS), Combi- Braking System (CBS), Daytime Running Lights (DRL) etc.
- To achieve good performance, a strong political commitment and co-ordination among road safety agencies, elected members and ministers at the state and national level is essential. The policy should emphasise vertical and inter-departmental coordination.
- Interventions under each focus area should be prioritised based on its effectiveness and likelihood of a positive impact, availability of adequate resource capacity (manpower, knowledge, technology, infrastructure and finances) and garnering support from the public and the government to implement them.

7 Conclusion and way forward

7.1 Conclusion

Some key takeaways include,

- Understanding that policy formulation is not a one shot process, rather a continual process that requires implementation and modification at regular intervals.
- A road safety policy, though always viewed as a part of the broader picture, is the guiding document that should essentially define the main directions and actions to be taken up to achieve the policy goals and the road safety vision. It should address "how" at the State level road safety can be accomplished. It should be treated as a prelude to the action plan which details out specific activities, their operation and monitoring of their effectiveness to ensure the desired policy outcomes.
- Knowledge sharing is one of the most underutilised approaches when devising any policy. It is important to learn from existing road safety practices and adopt them to suit our contextual needs. Indian states such as Haryana, Punjab, Karnataka, and Delhi are a few examples to learn from, owing to the quality of their policy documents that borrows vision and strategies from global best practices. Several international case studies including that of the UK, USA, and Netherlands point to reduction in road crash fatalities due to realistic and achievable road safety strategies and policies that were adopted. These countries have prioritised preventing fatalities and severe injuries through vision statements that led to new design principles backed by research and data analysis, planning and engineering methods such as safety audits, black spot reduction, speed regulation and implementation of regional pilot projects to test the effectiveness of proposed strategies.
- It is necessary to take into consideration the existing institutional and legal framework; translate it from paper to action on ground through strict enforcement and thereby reduce road fatalities, injuries and crashes.
- It is necessary to consider the policy as an outcome of multi-sectoral deliberations and ensure constant coordination among various institutions at the national, state and district levels including effective public participation.

7.2 Way forward

We all know that crashes are preventable. Adoption of an appropriate Road Safety Policy is the main driving force in delivering effective countermeasures to prevailing road safety issues. This study serves as a reminder to devise a document that directs effective action on ground through detailed road safety action plans. Therefore, the study is to be followed by a detailed analysis of the Road Safety Action Plans of the selected states to understand how effective the Road Safety Policies have been in playing a directive role for practical changes on ground.

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